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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.          | CONFIRMATION NO. |
|--|-------------|----------------------|------------------------------|------------------|
| 10/804,952   | 03/19/2004  | Patrick W. Tandy     | MIO 0048<br>V2/40509.295/98- | 8084             |
| 7590   | 08/03/2006  |                      | EXAMINER                     |                  |
| DINSMORE & SHOHL LLP<br>One Dayton Centre<br>Suite 500<br>One South Main Street<br>Dayton, OH 45402-2023 |             |                      | TRINH, MINH N                |                  |
|  |             |                      | ART UNIT                     | PAPER NUMBER     |
|  |             |                      | 3729                         |                  |

DATE MAILED: 08/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                   |
|------------------------------|------------------------|-------------------|
| <b>Office Action Summary</b> | Application No.        | Applicant(s)      |
|                              | 10/804,952             | TANDY, PATRICK W. |
|                              | Examiner<br>Minh Trinh | Art Unit<br>3729  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 22 May 2006.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 9-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 9 and 10 is/are rejected.
- 7) Claim(s) 11-15 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

|   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date. _____.   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____.                                   |

## DETAILED ACTION

1. Applicant's amendment filed on or about 5/22/06 has been fully considered and made of record.

### *Terminal Disclaimer*

2. The terminal disclaimer filed on 5/22/06 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US pat. 6729024 to Tandy has been reviewed and is accepted. The terminal disclaimer has been recorded.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (APA) see Fig. 1-2 and the discussion under the heading "BackGround", pages 1-3.

APA, as shown in the Figs. 1-2 discloses a method of fabricating a circuit board comprising as claimed by the present invention: forming a first layer of conductive material over an insulating layer See Fig. 1) removing portions of said conductive material of said first layer to define a first circuit pattern and a first rail area that is electrically isolated from said first circuit pattern (see Fig. 2). Note that the APA , inherently discloses the removing portions of said conductive material of said first layer from said first rail area (see Fig. 2, depicts the above process of forming conductive pattern area and the rails area, see the discussion in details in pages 1-3).

5. Additionally, Claims 9-10 are also rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukamoto (5841194) in view of APA.

Tsukamoto discloses a method of fabricating a circuit board comprising as claimed by the present invention by forming a first layer of conductive material 102 over an insulating layer 108, Tsukamoto however inherently discloses the removing portions of said conductive material 102 of said first layer to define a first circuit pattern or pad and a first rail area (end portions) that is electrically isolated from said first circuit pattern, and the removing portions of said conductive material of said first layer from said first rail area (see Fig. 1, depicts rail area and mounting pad which readable on the claimed circuit pattern and these circuit patterns are in form of non continuous similar to that as disclose by the present invention).

If argues that the Tsukamoto does not teach the amended subject matter to claim 9, the APA teaches that (see Fig. 2 of the APA). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to employ the APA's teaching of removing portions of said conductive material of said first layer from said first rail area in a way such that no continuous lengths of conductive material remain within said first rail area (see Fig. 2) in order to obtain a desired circuit substrate having the configurations above.

***Response to Arguments***

6. Applicant's arguments with respect to claims 9-10 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments regarding rejected claims have been acknowledged. Also, Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or rejections.

#### ***Allowable Subject Matter***

7. Claims 11-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### **Interviews After Final**

8. Applicants note that an interview after a final rejection will not be granted unless the intended purpose and content of the interview is presented briefly, in writing (the agenda of the interview must be in writing). Such an interview may be granted if the examiner is convinced that disposal or clarification for appeal may be accomplished with only nominal further consideration. Interviews merely to restate arguments of record or to discuss new limitations which would require more than nominal reconsideration or new search will be denied. See MPEP 714.13 and 713.09.

***Conclusion***

9. It is noted that any amendment made to the disclosure and the claims. Applicant requires to point out the support provide numeral references to the claimed limitations as well as support in the disclosure (i.e., page and line numbers and reference number associated with from the drawings) for better clarity (See 37CFR 1.111 and section 2163.06 of the MPEP).

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Trinh whose telephone number is (571) 272-4569. The examiner can normally be reached on Monday -Thursday 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (571) 272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mt  
7/26/06



MINH TRINH  
PRIMARY EXAMINER